# Mapping reveals 80% of England’s peatlands are dry and degraded, prompting urgent restoration plans



England’s peatlands, cherished for their ecological and climate benefits, have recently been mapped comprehensively for the first time, revealing alarming statistics: a staggering 80% of these vital ecosystems are found to be dry and degraded. This mapping initiative, backed by advanced satellite imagery and artificial intelligence, seeks to provide a pathway for restoration, crucial for both biodiversity and climate resilience.

The Environment Department (Defra) announced this innovative mapping approach, describing it as a significant advancement in understanding the state and extent of England’s peatlands. Peatlands act as essential carbon sinks, playing a pivotal role in combating climate change, managing flood risks, enhancing water quality, and providing habitat for diverse wildlife, including rare species like the golden plover and various dragonflies. The newly released open-source map not only identifies the extent and depth of peat but also highlights critical features like vegetation types, drainage channels, and land use impacts.

Notably, the mapping reveals that around 8.5% of England's surface is covered by peaty soils, predominantly located in regions such as the Pennines and parts of the Lake District. However, the reality that four-fifths of these areas are in a degraded state is a concern. The government’s findings underscore a critical message: while healthy peatlands have the potential to sequester carbon, degraded ones release significant amounts of carbon dioxide, exacerbating global warming.

In light of this grim assessment, the government is urging land managers to utilise the mapping data to enhance peatland restoration strategies. This includes vital actions such as blocking drainage channels to re-wet the land, which can reignite the natural processes that sustain these ecosystems. According to Dr. Sallie Bailey, chief scientist at Natural England, mapping such underground habitats poses considerable challenges, making the achievement “extraordinary” and a potential global benchmark.

Tony Juniper, chairman of Natural England, emphasised the myriad benefits of healthy peatlands, noting their role as natural carbon stores and their importance in sustaining England’s water cycle and rare flora and fauna. The map stands to inform better decision-making regarding peatland management, helping to target restoration initiatives precisely where they are needed most.

Additionally, substantial investment supports these efforts, with the UK government committing £16 million towards twelve projects aimed at restoring thousands of hectares of peatlands across the country. These initiatives are part of a broader £50 million strategy intended to restore approximately 35,000 hectares of degraded peatland by the end of the current parliamentary term. However, it’s critical to recognise that, presently, an estimated 87% of England’s peatlands remain degraded, making the task ahead daunting yet essential for both climate action and biodiversity conservation.

The Nature for Climate Peatland Grant Scheme further amplifies restoration efforts by providing funding opportunities for various stakeholders, from environmental groups to local authorities. This competitive scheme aims to significantly reduce peat emissions and restore vital habitats, reinforcing partnerships essential for effective landscape-level restoration.

Recent reports underline the gravity of the situation, indicating that nearly 80% of the UK’s 3 million hectares of peatlands have been adversely affected by unsustainable practices such as drainage and agricultural intensification. While there is notable progress—250,000 hectares have been restored in the last 30 years—this achievement is overshadowed by the ambitious target of restoring 2 million hectares by 2040. As the IUCN UK Peatland Programme stresses, fulfilling this goal is integral to meeting the UK’s climate and nature commitments.

In essence, the advancement of mapping technologies, coupled with robust government funding and innovative projects like AI4Peat, not only reveals the extent of degradation but also lays the groundwork for a concerted restoration effort. As stakeholders mobilise towards regenerating these ecosystems, the hope remains that revitalised peatlands will again serve as indispensable allies in the fight against climate change, fostering a balanced relationship between human activity and nature’s rhythms.

### Reference Map:

1. Paragraph 1, 2, 3, 4, 5
2. Paragraph 1, 5
3. Paragraph 1, 4
4. Paragraph 7
5. Paragraph 6
6. Paragraph 7
7. Paragraph 7

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

* <https://www.independent.co.uk/climate-change/news/natural-england-scientists-defra-government-pennines-b2748936.html> - Please view link - unable to able to access data
* <https://www.gov.uk/government/news/thousands-of-hectares-of-peatlands-set-to-be-restored-to-help-tackle-climate-change> - The UK government has announced £16 million in funding for twelve new projects aimed at restoring thousands of hectares of peatlands across England. These initiatives, ranging from the Great North Bog to the Norfolk Broads, are part of a broader £50 million investment to restore approximately 35,000 hectares of peatland by the end of the current Parliament. Peatlands are crucial for carbon storage, water quality improvement, and biodiversity support. However, 87% of England’s peatlands are currently degraded, emitting significant carbon dioxide annually. The restoration projects will enhance wildlife habitats and aid in natural flood management.
* <https://naturalengland.blog.gov.uk/2025/03/19/ai4peat-innovative-use-of-ai-to-map-and-restore-our-precious-peatlands/> - Natural England's AI4Peat project employs artificial intelligence to map peatland surface features across England's uplands. By utilizing deep learning models and high-resolution aerial imagery, the project creates detailed maps of peatland conditions, including features like grips, gullies, and haggs. This innovative approach allows for efficient monitoring and management of peatlands, supporting restoration efforts and aiding in the assessment of environmental impacts. The AI-generated data assists field workers in pinpointing areas requiring intervention, thereby enhancing the effectiveness of peatland restoration projects.
* <https://www.iucn-uk-peatlandprogramme.org/news/new-report-celebrates-uk-peatland-restoration-climate-and-nature-targets-still-risk> - A report by the IUCN UK Peatland Programme reveals that 250,000 hectares of UK peatlands have been restored over the past 30 years. While this progress is commendable, it falls short of the 2-million-hectare target set for 2040. The report highlights that 80% of the UK's 3 million hectares of peatlands have been damaged due to drainage, agricultural intensification, and unsustainable practices. Achieving the restoration target is crucial for meeting the UK's climate and nature commitments, as degraded peatlands emit significant greenhouse gases.
* <https://www.gov.uk/guidance/nature-for-climate-peatland-grant-scheme> - The Nature for Climate Peatland Grant Scheme is a competitive funding initiative aimed at restoring peatlands in England's uplands and lowlands. Open to environmental groups, local authorities, charities, public bodies, and landowners, the scheme supports projects that reduce peat emissions, restore degraded peatlands, and provide broader environmental benefits. Objectives include reducing emissions by 5.7 megatonnes of CO₂ equivalents by 2050 and restoring 35,000 hectares of degraded peat by March 2025. The scheme emphasizes landscape-scale applications and encourages partnerships for effective restoration efforts.
* <https://www.iucn-uk-peatlandprogramme.org/peatland-code/peatland-code-projects-summary> - The IUCN UK Peatland Programme's Peatland Code facilitates the restoration and protection of the UK's peatlands by enabling landowners to generate carbon credits through restoration projects. The code has seen increasing participation, with 35 projects registered by 2024, covering over 4,000 hectares and resulting in significant emissions reductions. The code's expansion to include lowland peat habitats, such as fens, aims to attract private investment and support the UK's climate targets. The code provides a standardized approach to validate and verify the carbon benefits of peatland restoration.
* <https://www.ceh.ac.uk/our-science/projects/ggr-peat> - The GGR-Peat project, funded by UK Research and Innovation, demonstrates methods and technologies to transform degraded UK peatlands into effective greenhouse gas removal systems. Establishing three field sites with tailored interventions, the project monitors environmental impacts and quantifies greenhouse gas removal benefits. By restoring peatlands, the project aims to enhance carbon sequestration, contributing to the UK's climate goals. The initiative emphasizes innovative land-management practices to secure long-term greenhouse gas removal and supports the broader objective of mitigating climate change through natural processes.